

A N N A L E S Z O O L O G I C I

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Carpathobyrrhulus tatricus sp. n. z Tatr
(Coleoptera, Byrrhidae)

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Carpathobyrrhulus tatricus sp. n. from the Tatry
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[With 4 textfigures]

The genus *Carpathobyrrhulus* GANGLB. was established in 1902 by L. GANGLBAUER for the species *Pedilophorus transsylvanicus* (SUFFR.). The latter differs considerably from other species of the genus *Pedilophorus* STEFF. known at that time.

It is a characteristic feature of the genus *Carpathobyrrhulus* GANGLB. that the inner surface of the tibiae of the legs of all three pairs is provided with grooves in which the tarsi can repose. This is also a feature distinguishing it from the genus *Pedilophorus* STEFF. In species belonging to the latter genus these grooves are found only on the tibiae of the legs of the first pair.

The species for which GANGLBAUER established his new genus *Carpathobyrrhulus* GANGLB., bearing the original name *Byrrhus transsylvanicus* SUFFRIAN, 1848, is, by original monotypy, the type species of the genus. Hitherto, only this species — *Carpathobyrrhulus transsylvanicus* (SUFFR.) — occurring

in the Tatry Mountains and in the Eastern and Southern Carpathians, has been included in the genus *Carpathobyrrhulus* GANGLB.

Working on the fascicle devoted to the family *Byrrhidae*, of the „Keys for the Identification of Polish Insects”, I revised the determinations in the collection of the Zoological Institute of the Polish Academy of Science in Warszawa. The collection includes more than 200 specimens, determined as *Carpathobyrrhulus transsylvanicus* (SUFFR.), from the Czarnohora Mountain Range, as well as from the Tatry. The Tatry specimens attracted my attention by a slightly different appearance and smaller size. A detailed examination of all specimens, with particular reference to their genitalia, revealed that all those from the Tatry belong to a new species described further below. It should be added that my attention was attracted to the differences between these species chiefly owing to the opportunity to compare large series of both Tatry and Czarnohora specimens.

***Carpathobyrrhulus tatricus* sp. n.**

Holotype. Male. Length of body 4,5 mm. Body oval, strongly convex, with a green metallic glitter. Head distinctly and fairly densely punctate, with a small white hair rising from each puncture. A small central portion of the frons not punctate. Antennae rather narrow, consisting of 11 joints; the third joint twice as long as the second; joints 5–10 gradually increasing in width, the eleventh joint ovate. Pronotum regularly convex, somewhat less densely punctate than the head, and the hairs in the punctures dark, smaller and more delicate than on the head. Scutellum triangular and small. Elytra strongly convex, not very elongated. Punctures on the elytra deeper, larger and more scattered than on the pronotum; only the punctures at the suture smaller and shallower. Hairs very dark, very small and delicate. Ventral side of body black, dotted, bearing rather sparse, yellow-white, distinct hairs. Legs black. All tibiae provided with grooves for accommodation of the tarsi. Third tarsal joint provided with a large, membranaceous appendage. Claws small,

delicate. Penis dilatated, apically cleft. Parameres broad, their apex as on fig. 1.

Allotype. Female. Length of body 4,6 mm. Resembling most closely the holotype. Genital plates broad, spatulate, with an arcuate inner margin (Fig. 3).

The holotype and the allotype were sifted from moss by Dr. Edward MAZUR. The holotype on July 9, 1936, in the Starorobociańska Valley, and the allotype on July 28, 1936, in the Kasprowa Valley in the Tatry Mountains. They are kept, together with all the 85 paratypoids, in the collection of the Zoological Institute of the Polish Academy of Science in Warszawa.

The variations observed among the paratypoids concern chiefly the length of the body which ranges between 3,8 mm and 5,5 mm, while the body length of a 90 per cent. majority of the specimens falls within the limits of 4,0–5,0 mm. Average length of body 4,6 mm. Also the coloration of the dorsal side of the body varies. Most specimens are of a metallic green colour while the remaining ones show gradations of metallic blue, metallic navy blue and finally black in the one direction, and purple-green in the other. The ventral side of the body is in most specimens black, in some more or less dark brown. Coloration of the hair on the head and ventral side of the body varies too: from almost white to rusty.

All paratypoids, numbering 85 specimens, come from the Polish part of the Tatry Mountains, namely from:

Chochołowska, Kościeliska and Ku Dziurze Valleys, Mały Giewont, Giewont, Czerwone Wierchy, Małolęczniak, Kondracka Pass, Kopa Kondracka, Kalatówki, Goryczkowa Pass, Boczań, Jaworzynka Valley, Kopa Magóry, Hala Gąsienicowa, Liljowe Pass, Zielone Stawy Gąsienicowe, Czarny Staw Gąsienicowy, Zmarzły Staw at Zawrat, Kościelec, Świnicka Pass, Świnica, Pańszczyca Valley, Krzyżne and Czarny Staw near Morskie Oko. The specimens were collected by A. BARTOSZYŃSKI, E. MAZUR, A. RIEDEL and Sz. TENENBAUM between May 24 and August 22, at altitudes between 1198 and 2301 m above sea level. They were, for the most part, found under stones, in grass, in moss, creeping on roads, frequently in the vicinity of snow patches.

The following material of *Carpathobyrrhulus transsylvanicus* (SUFFR.) was at the disposal of the author and served for comparative examinations referred to further on.

Ukrainian SSR, Uzhhorod, 3 specimens, leg. VI. ZOUFAL. Czarnohora Mountain Range: Worochta, Turkuł, Dancerz, and Howerla, 114 specimens collected by A. BARTOSZYŃSKI and E. MAZUR between June 7 and August 13 at altitudes between 1301 and 2058 m above sea level. They were found chiefly under stones, but were also collected from plants, from the ground, and sifted from grass roots. Rumania, Borsa, Mte. Pietrosul, 3 specimens, leg. B. KOUŘIL. Transylvania, no further data, 1 specimen.

Carpathobyrrhulus tatricus sp. n. differs from *C. transsylvanicus* (SUFFR.) first and foremost in the structure of the genitalia, in particular in the shape of the apical part of the parameres in males, and in the shape of genital plates in females. The parameres of *C. transsylvanicus* (SUFFR.) are tapering towards the end much more gently and the apex is shaped as on fig. 2; the inner margin of the genital plates is straight and not arcuate and the plates are therefore more triangular (Fig. 4), and not spatulate. The two species differ also in the length of the body, which can be particularly well noticed when large series are compared. The following table illustrates these differences:

species	number of specimens measured	length of body		limits of length of body for 90 per cent. of specimens	average length of body
		smallest specimens	largest specimens		
<i>C. tatricus</i> sp. n.	80	3,8	5,5	4,0—5,0	4,6
<i>C. transsylvanicus</i> (SUFFR.)	113	4,2	6,3	4,8—5,9	5,2

Less easy to notice are the following differences: shape of body, in *C. transsylvanicus* (SUFFR.) slightly more elongated and somewhat less convex; pronotum less regularly convex, the elongated depression at the base less distinct, and finally, the claws in *C. transsylvanicus* (SUFFR.) much larger and

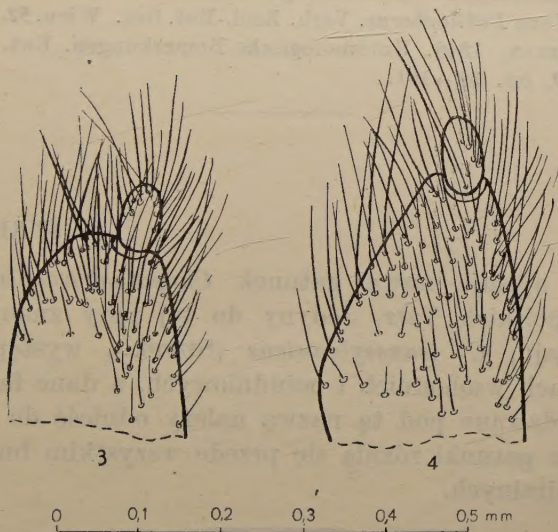
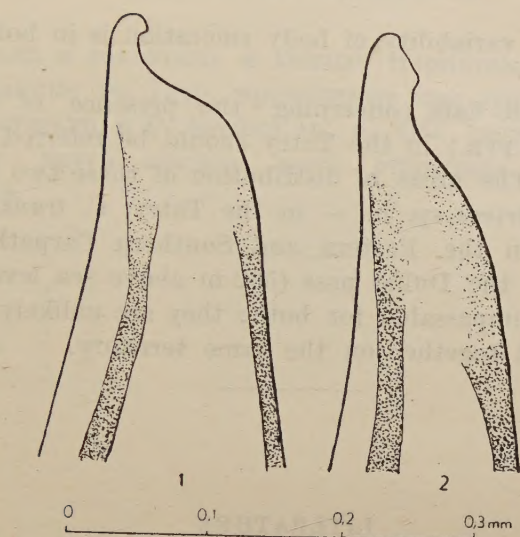


Fig. 1. *Carpathobyrrhulus tatricus* sp. n., apical part of paramere of the male.

Fig. 2. *Carpathobyrrhulus transsylvanicus* (SUFFR.), apical part of paramere of the male.

Fig. 3. *Carpathobyrrhulus tatricus* sp. n., genital plate of the female.

Fig. 4. *Carpathobyrrhulus transsylvanicus* (SUFFR.), genital plate of the female.

stronger. The variability of body coloration is in both species equally great.

All faunistic data concerning the presence of *C. transsylvanicus* (SUFFR.) in the Tatry should be referred to *C. tatricus* sp. n. The areas of distribution of these two mountain species, *C. tatricus* sp. n. — in the Tatry, *C. transsylvanicus* (SUFFR.) — in the Eastern and Southern Carpathians, are separated by the Dukla pass (502 m above sea level), which seems to be impassable for both; they are unlikely therefore to be present together on the same territory.

LITERATURE

1. GANGLBAUER L. 1902. Die generische Zerlegung der *Byrrhiden*-Gattung *Pedilophorus*. Verh. Zool.-Bot. Ges., Wien, **52**, pp. 92—94.
 2. SUFFRIAN. 1848. Entomologische Bemerkungen. Ent. Zeit., Stuttgart, **9**, pp. 98—101.
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STRESZCZENIE

Autor opisuje nowy gatunek *Carpathobyrrhulus tatricus* sp. n. z polskich Tatr. Jedyńy do tej pory znany gatunek tego rodzaju, *C. transsylvanicus* (SUFFR.), występuje tylko w Karpatach wschodnich i południowych, a dane faunistyczne z Tatr podawane pod tą nazwą należy odnieść do *C. tatricus* sp. n. Oba gatunki różnią się przede wszystkim budową aparatów genitalnych.

РЕЗЮМЕ

Автор описывает новый вид *Carpathobyrrhulus tatricus* sp. n. из польских Татр. Единственный до сих пор известный вид этого рода, *C. transsylvanicus* (SUFFR.), встреча-

ется только в восточных и южных Карпатах, а фаунистические данные из Татр, приводимые под этим названием, следует отнести к *C. tatricus* sp. n. Оба вида отличаются друг от друга прежде всего строением генитальных аппаратов.

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